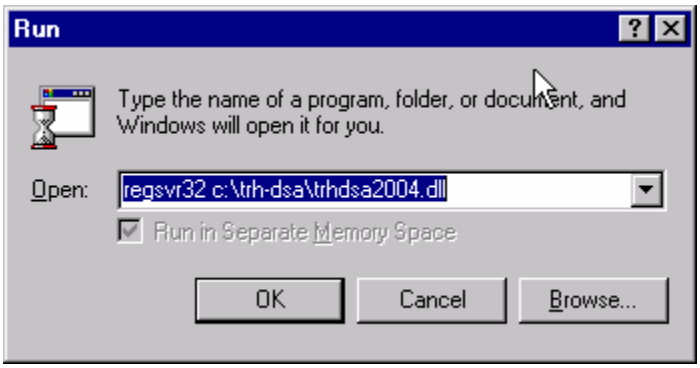
INSTALLING THE TOWN OF RICHMOND HILL DEVELOPMENT SUBMISSION APPLICATION

There are currently three separate versions of the application, supporting Autocad 2000i, 2002 and 2004. To obtain the latest copy of the application please contact Sam Hifawi; Supervisor of Design at 905-771-8830 ext 3541 or e-mail your request to shifawi@richmondhill.ca. Please be sure to specify the version of Autocad you are running.

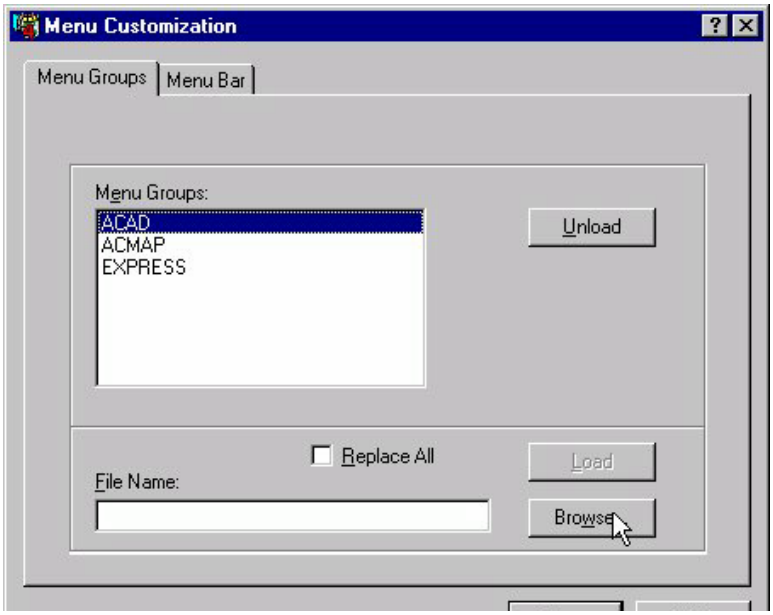
Create a new folder on your C: drive called "C:\TRH-DSA". Launch the self extracting file "TRH-DSA.exe" and extract the files to this folder. The program must be extracted to the folder "C:\TRH-DSA" otherwise it won't work, therefore please ensure that you type the name exactly as shown (without the quotes). If upgrading from a previous version, please ensure to delete the contents of the C:\TRH-DSA folder prior to extracting the new files.

Once you have extracted the files to the C:\TRH-DSA folder then you must register the program DLL. Click the Start Menu > Run and then type the following command. The name of the program DLL will vary, depending on what version of the program you are installing (i.e for Autocad 2002 you would type trhdsa2002.dll and for Autocad 2000i you would type trhdsa2000).

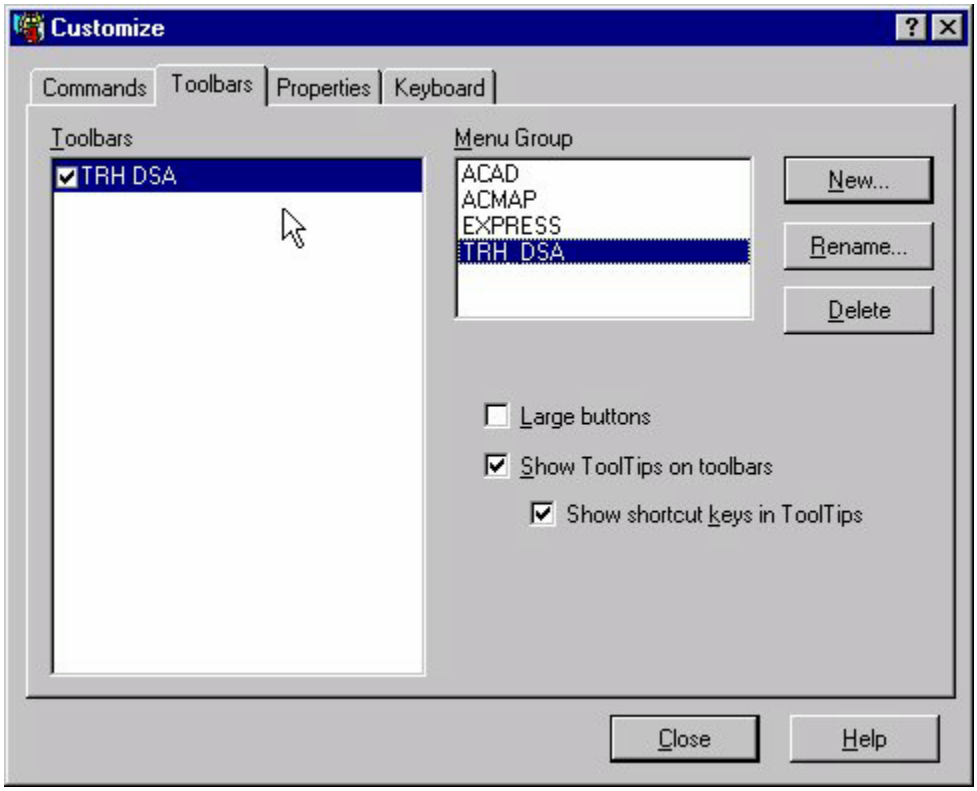


Click OK to register the DLL. The following dialog should display.

Load the toolbar by clicking on the TOOLS>CUSTOMIZE>MENUS pull down. The Menu Customization dialog will display as indicated below. Click on the Browse button and browse to the C:\TRH-DSA folder. Select the trh-dsa.mns file and then click on the Load button to load it. Close the dialog box.



Now turn on the TRH-DSA toolbar by clicking on the VIEW>TOOLBARS pulldown menu. The "Customize Toolbars" dialog will appear. Click on the Toolbars tab and toggle on the TRH-DSA toolbar to turn it on as indicated below.



Click on the Close button to close the dialog. The TRH-DSA toolbar should appear as indicated below.

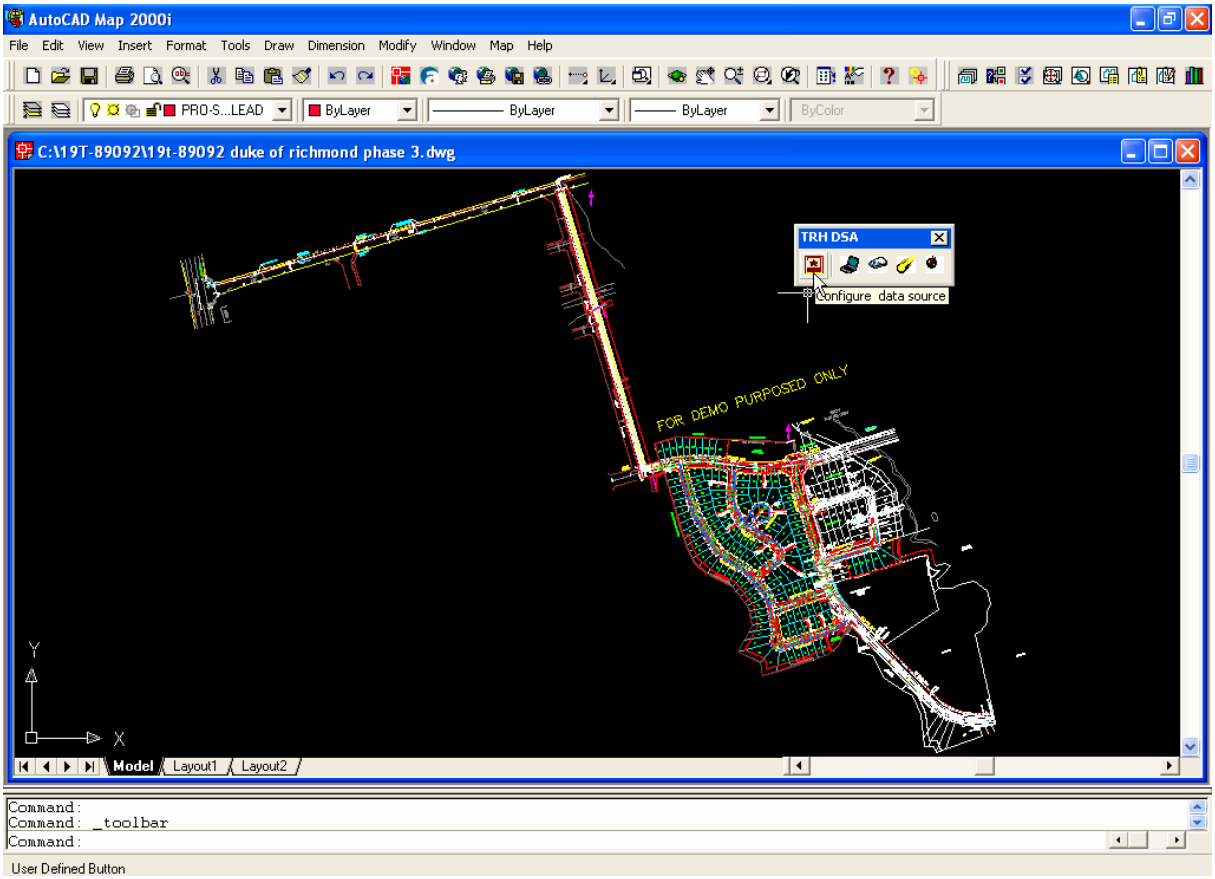
.

This completes the installation process.

STEP 1 - CONFIGURING THE DATABASE

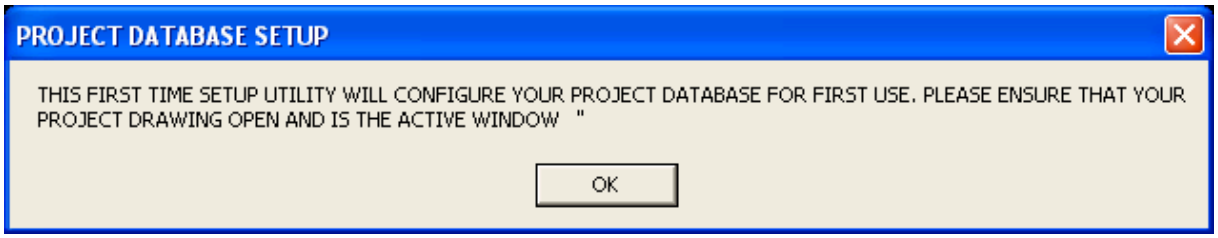
The first step is to configure the database for first use. Launch Autocad and open the project drawing. If the TRHDSA tool bar is not visible then click on the View>Toolbar menu and select the TRH_DSA menugroup. Toggle it on and the toolbar will display as shown.

If you have more than one drawing open in the current session make sure the drawings that you wish to create the data source for is the active window. Click on the Configure data source icon as indicated below.



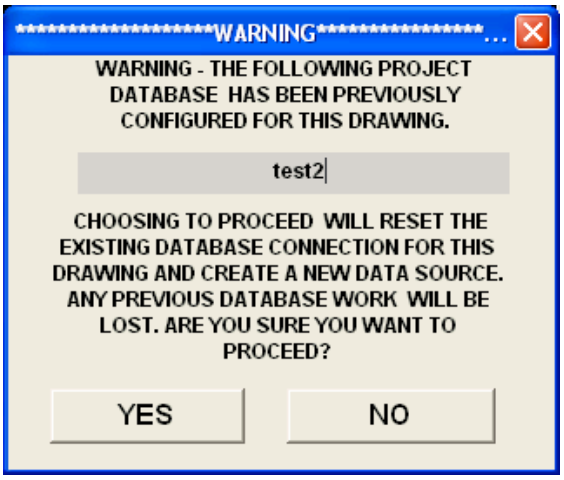
The application will be loaded and the program splash screen will display.

The following information prompt will then appear.

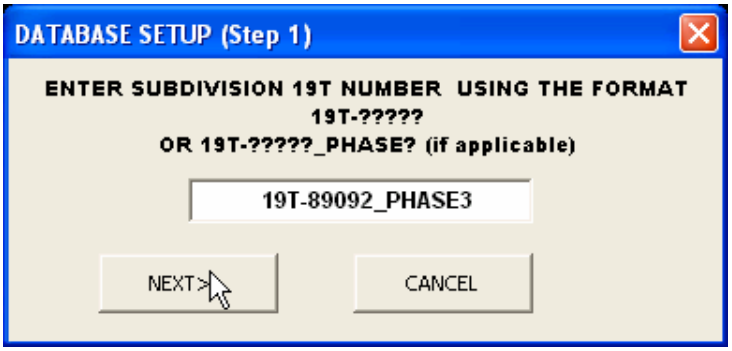


Click OK to proceed with configuration of your project database.

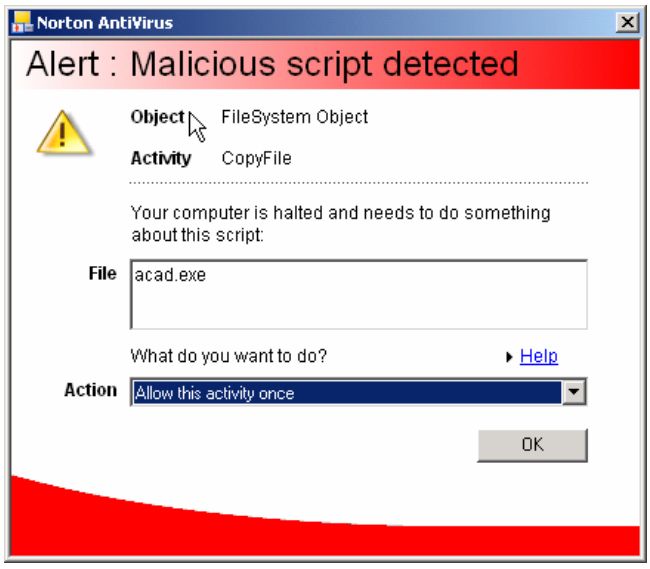
Under normal circumstances you will only run the “CONFIGURE DATABASE” utility once and you would therefore not see the following dialog. If, however. you have already previously configured a data source for the current drawing, a warning message will appear advising you that if you choose to continue, any previous work will be lost. Unless you wish to overwrite any previously created database and create a new database you should click “NO” In the example below I chose “yes” To overwrite the existing data source called “test2” which I had previously created in testing and development of this program.



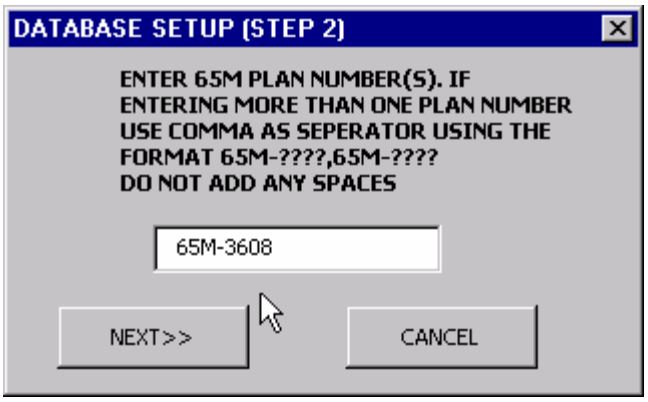
The following dialog will display requesting you to enter the subdivision 19T-Number in the format indicated. The 19T number that you enter will be used to create a data source with the same name. In the example below I entered 19T-89092_PHASE3. Click Next to proceed.



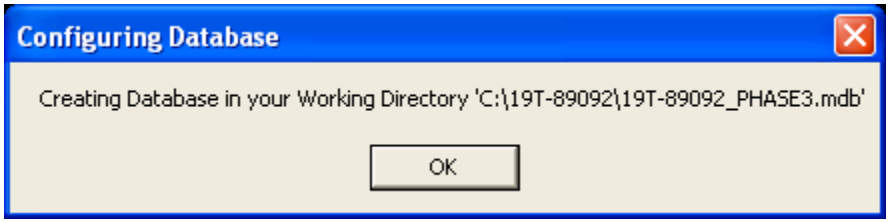
If you are using Norton AntiVirus and "Auto-Protect" is enabled, you may receive the following prompt. This is OK. Simply toggle the **Action** Pulldown to read "Allow this activity once" and then click OK.



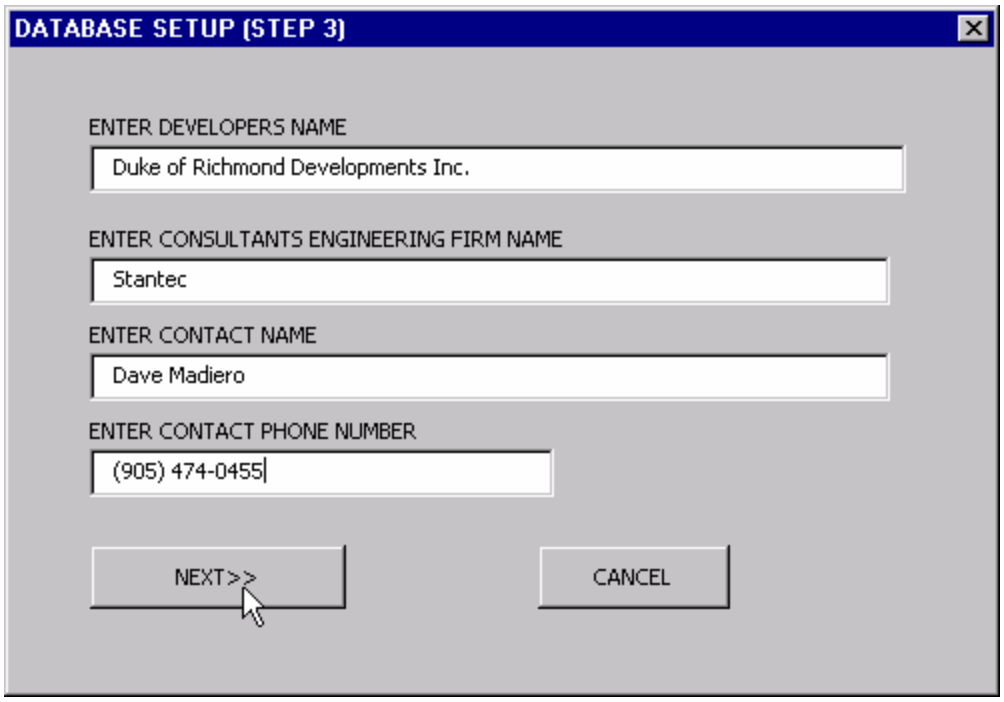
You will then be requested to enter the 65M registered plan of subdivision number for the database. Make sure you enter the correct number. This will be written to your database to assist Town staff in down loading the information into the corporate database. Click next to proceed.



The following prompt will appear advising you that it is creating a Microsoft Access project database within your working directory for the current drawing. The prototype database is empty replica of the Town of Richmond Hills Municipal Infrastructure Database System (MIDS) corporate dataset. Click OK to continue.



Now you will be required to enter some key information regarding the subdivision to assist Town staff. This information will be written and stored within your configured database. Click next to proceed.



A prompt will display advising you that the program will now write the contact information to the database. Click OK to proceed.

The program then writes the information to the database and when it has completed the following prompt will display advising you that the database has been successfully configured.

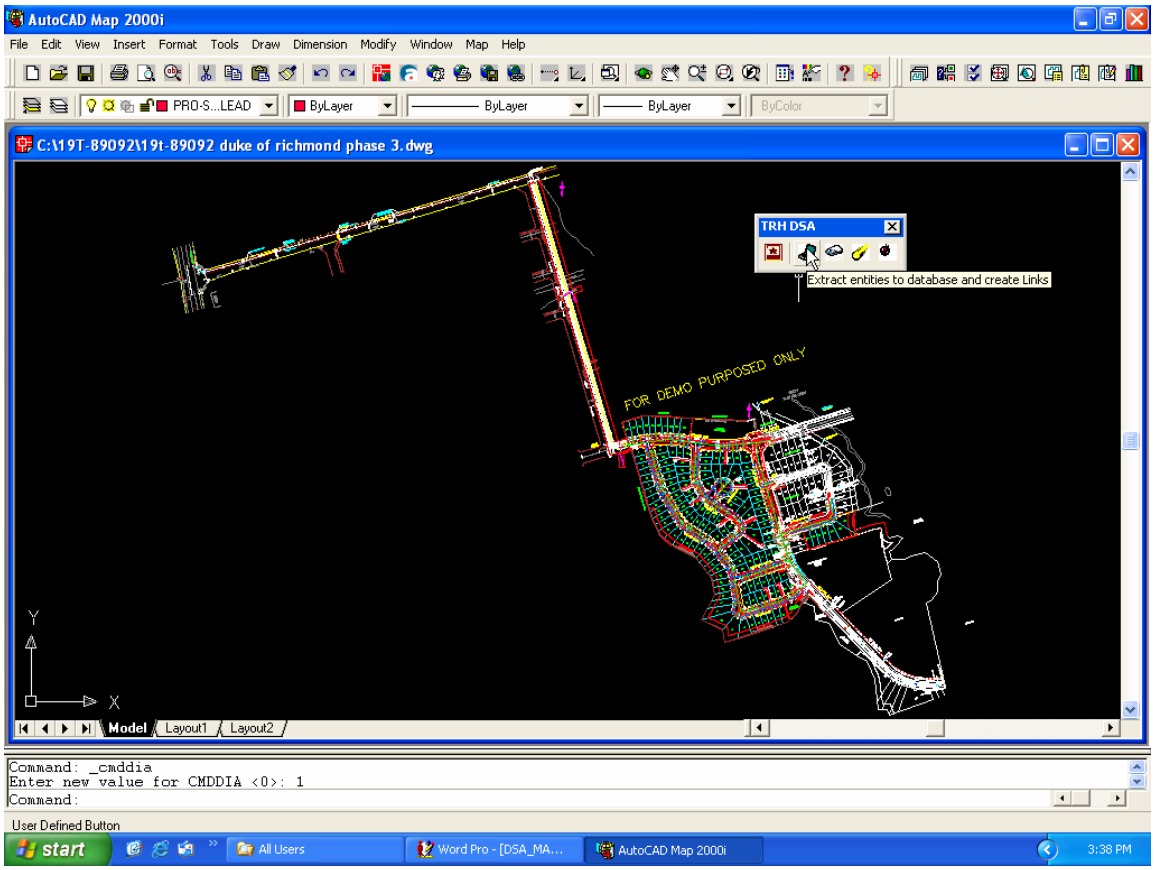
That's all there is to it. Your database is ready to be populated. Proceed to **Section 2 - Mass Extraction of Assets.**

STEP 2 - MASS EXTRACTION OF MUNICIPAL ASSETS TO THE DATABASE

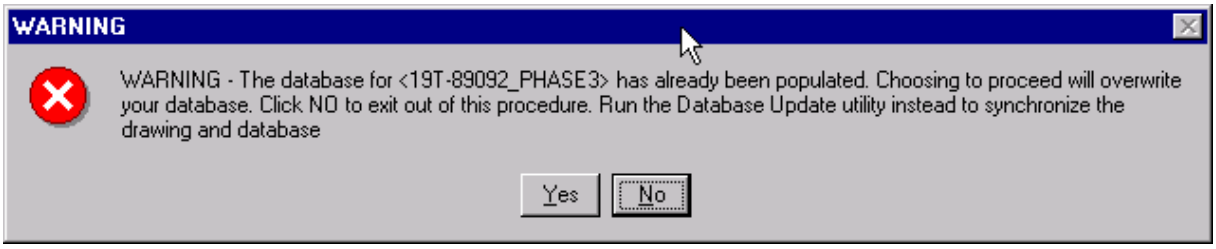
The next step in the process is to run the mass extraction utility to extract all of the proposed STORM, WATER and SANITARY assets to the project database.

As the program needs to know what blocks and lines to extract and link to the database, it is critical that the drawing has been created in strict conformance and rigidly adheres to the Town of Richmond Hill new CADD standard. The standard is quite simple when compared to most municipal Cadd standards. The standard has been developed in conjunction with this program to ensure the block and layering organization is discrete enough to permit automated extraction of the assets to the database, while at the same time ensuring that the standard is not unnecessarily cumbersome to the Cad draftsman/designer. Before running the mass extraction utility you must ensure that the drawing has been created in strict conformance. It is strongly recommended that you visually QA your drawing prior to running the mass extraction utility by isolating all of the Town of Richmond Hill proposed SANITARY, STORM and WATER layers. You may also want also have the property fabric turned on as well to assist you in the QA process. By visually reviewing the drawing in this way, any layering problems should be visually evident. Make sure to fix any layering problems prior to running the mass extraction utility.

Running the mass extraction utility must only be run once per project (i.e. immediately after you have configured your data source as previously outlined in STEP 1). Click on the mass extraction icon as indicated below.

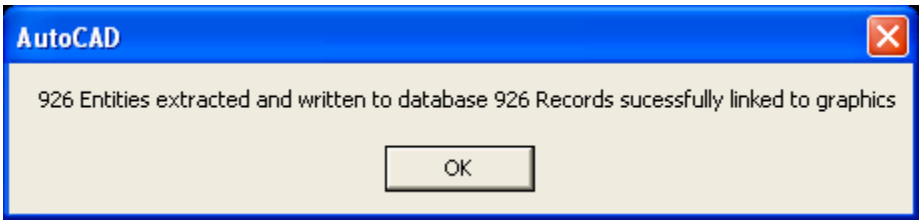


If the mass extraction and linkage process has already been previously completed and the database has already been populated, you will see the following warning message. If you choose to proceed, all existing records will be overwritten and any data entry work you had previously completed will be lost. CLICK NO to cancel the mass extraction routine. If you want to synchronize your existing database with the drawing, run the update original database utility instead.



Under normal circumstances you will see the following prompt. This prompt assures that the existing database is empty and it is safe to proceed. Click OK to begin the process.

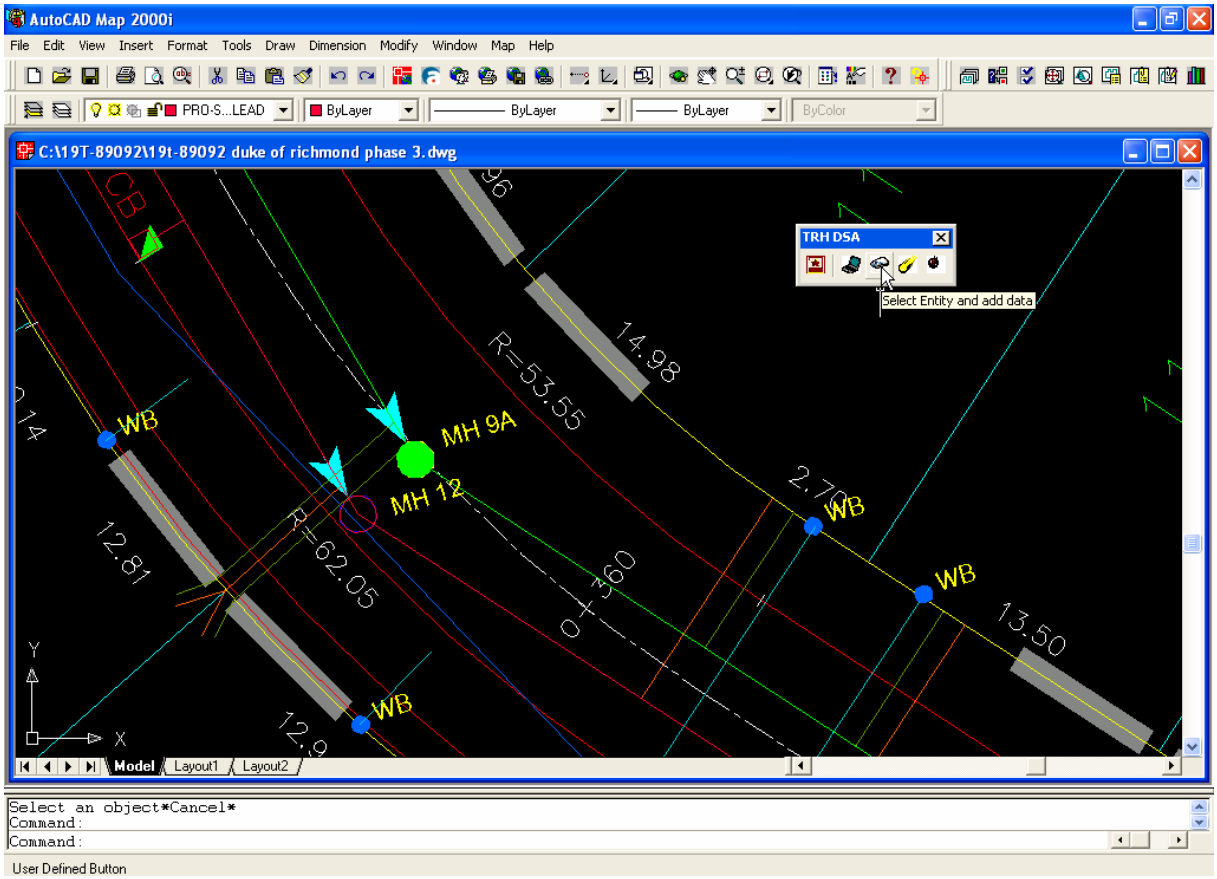
After you click OK the AutoCad command prompt will scroll with messages advising you that it is extracting the manholes, valves, sewers etc. and building the links between the database and the graphics. Depending on the size of the drawing and the speed of your computer, this may take a few minutes. When the mass extraction utility is completed the following prompt will appear advising you of the number of assets that have been written and linked to the database.



The project database has now been populated and linked to the graphics. Now proceed to **STEP 3 - ADDING ASSET DATA**

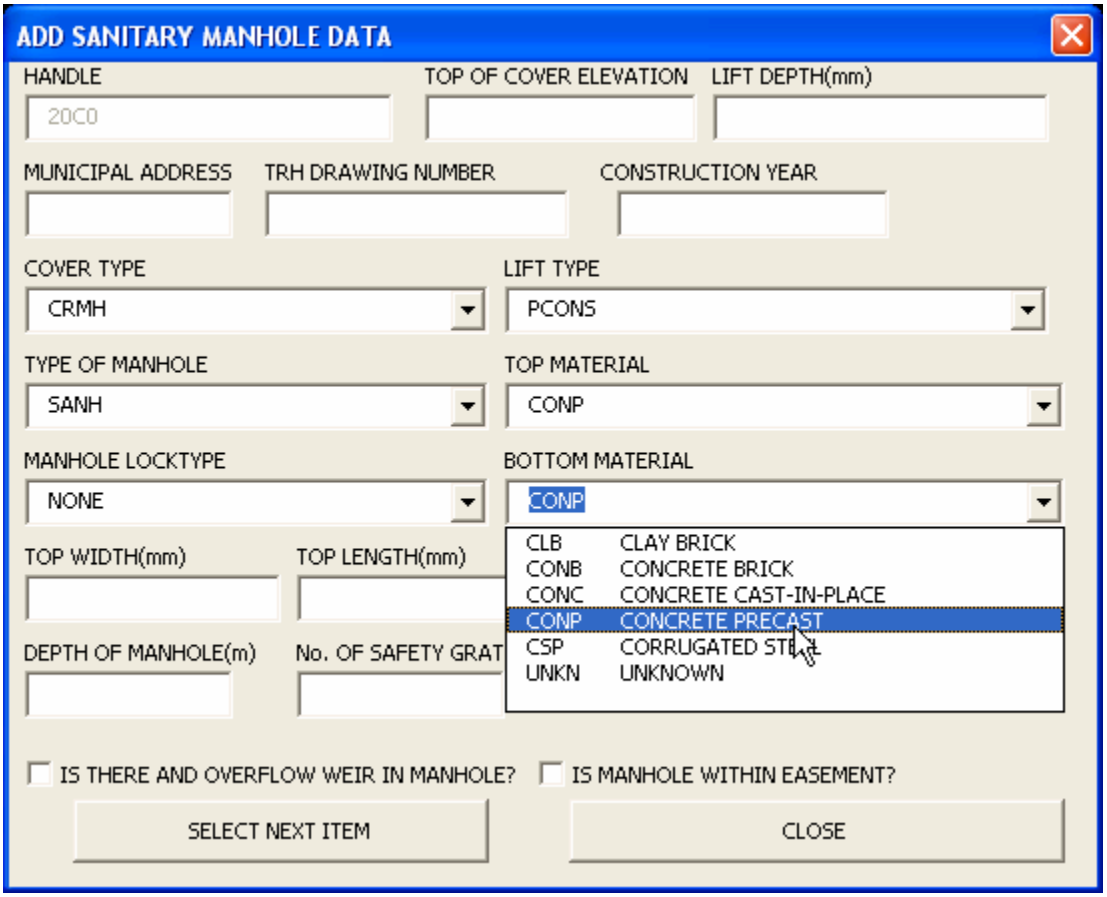
STEP 3 - ADDING ASSET DATA

Adding the data to the dataset is a simple process. Simply click on the “Select Entity and Add Data” icon as indicated below.

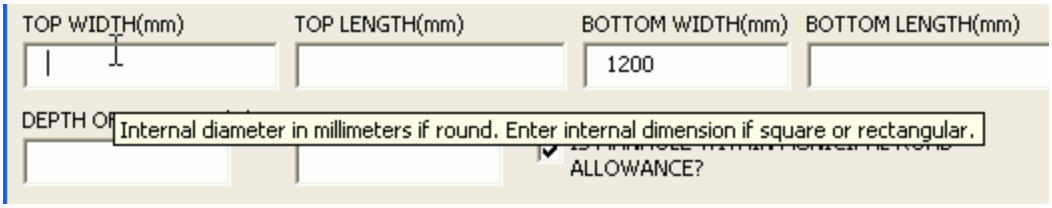


The AutoCad command prompt will request that you “select an object”.

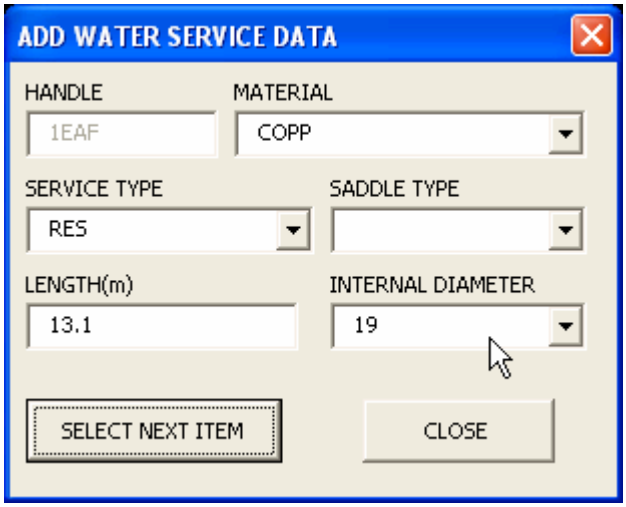
In this example I am selecting sanitary manhole 9A. Once selected the program displays the corresponding dialog box for that entity to permit you to enter the required details as indicated below. Pick lists have also been provided to assist you in choosing from predefined pick-lists.



If you need additional information regarding a particular field, simply move your cursor over the desired field and a control tip will display providing additional information to assist you in filling in the field. For example, holding the cursor over the TOP WIDTH (mm) field in the ADD SANITARY MANHOLE form displays the following tip.



Once you have filled in all the fields for the asset simply click on the “SELECT NEXT ITEM” button. The form will close and the information is written to the database. You will then be prompted to select the next entity. You can proceed in any sequence you want. You can select another sanitary manhole or any other STORM, SANITARY or WATER asset. In this example I select the water service to Lot 118. You can see from the dialog box that much of the required information such as length of service, material and diameter etc. is filled in by default. Fill in the remaining information and make any required changes.



Continue entering data by clicking “SELECT NEXT ITEM” or click CLOSE to quit this utility. Once all asset data has been filled in using this tool the drawing file and the associated database file shall be burned on CD and forwarded to the Town of Richmond Hill Engineering Department.

One complete hardcopy set of drawings shall be included with the submission. The digital submission will be analyzed to ensure that it is complete and accurate. If the digital submission is determined to be incomplete or if it contains an unacceptable number of errors such that it is apparent that the work has not been independently checked by the Consultant prior to being submitted to the Town, the Town will cease its review and the package will be returned to the Consultant to be corrected and resubmitted.

If drawing changes are made after the database has been populated, you will need to run the “Update Original Database due to drawing changes” utility to but the database and the drawing back into sync. Refer to the "Database Maintenance" section of this user manual for further information.

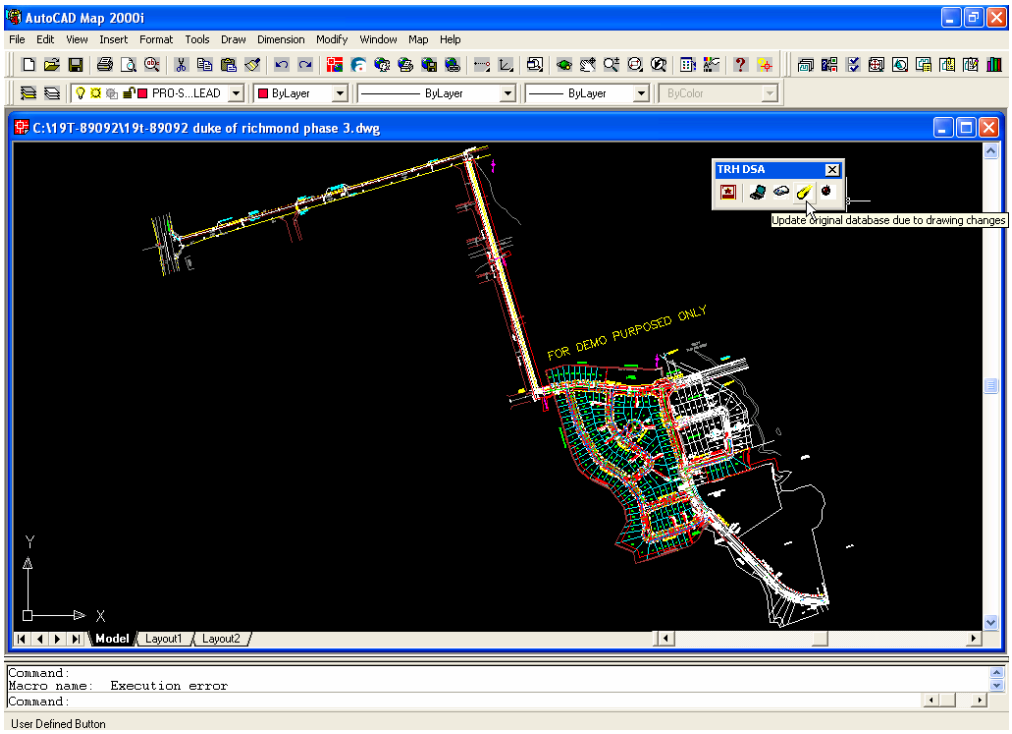
DATABASE MAINTENANCE

If any drawing changes are made at any stage after the mass extraction utility has been run, then the database and the graphics will be out of sync. If you make any changes to the graphics such as the addition of new proposed storm, sanitary or water entities, then it is important that you run the "Update Original Database due to drawing changes" utility. This utility scans the drawings for any new graphics entities that have been added to the drawing since the initial mass extraction utility has been run and adds them to the database. It also scans the database to check for orphaned records (i.e. associated graphic was deleted) and if it finds any it deletes them from the database. After running this utility your drawing and database will be 100% synchronized.

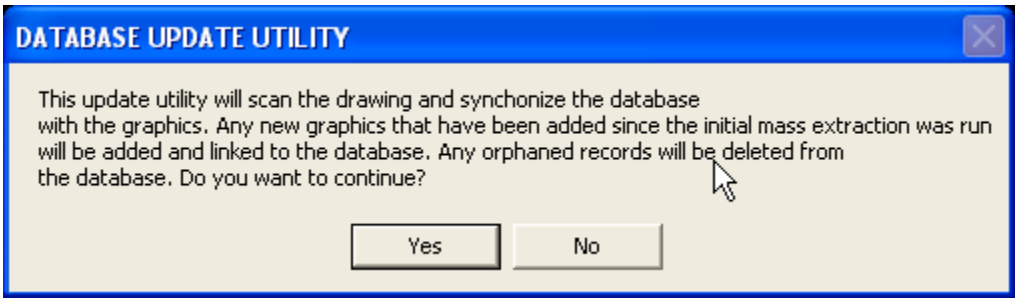
Even if you are not sure but you suspect that there may have been changes to the drawing or database since you initially ran the mass extraction routine then go ahead and run this database maintenance routine to ensure that they are synchronized. There is no risk to your existing database and data.

Extra steps have been taken to ensure that the database is kept synchronized with the drawing. Your configured data source will be password protected. In the event that you have database software such as Microsoft access on your computer you will not be able to open the file to edit the data. This ensures that all database modifications are made within the TRHDSA application to ensure the integrity of the database is protected.

To run the "Update Original Database due to drawing changes" utility, click on the tool bar icon as indicated,



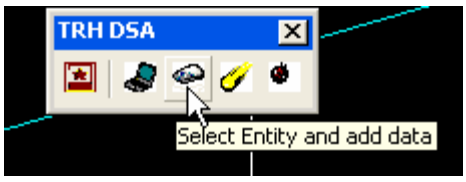
The following prompt will then be displayed,



Click YES to run the update database utility.

The utility scans the drawing and database and synchronizes them to insure 100% database/graphic integrity. Even if it detects no changes all existing graphic links are rebuilt from scratch between the database and the graphics. There is no risk of loosing any existing data by running this utility. At the end of the process a prompt will be appear advising you that the database has been synchronized as indicated below.

Another important use of the database update utility is as follows. In the process of clicking on assets and adding data using the “Select entity and add data” utility



You may encounter an asset where you receive the following message when you click on it instead of seeing the associated database form that you would expect to see.

This message indicates that the entity was not written or linked to the database as part of the original mass extraction routine. The reason it wasn't is probably because the block or layer that the entity was drawn on does not conform to the Cadd standard. Or, in the case of a block entity, it may be that it originally did conform to the layer standard and was picked up as part of the original mass extraction routine but subsequent to this, the block was exploded. Exploding the block would destroy the block reference and the associated link. The blocks must never be exploded.

If you see this message, you will have to correct the layer setting of the line or block entity. If the incorrect block was used or the original block was exploded you will have to delete the exploded block entity and insert the correct block in its place. Once you have made the correction to the block/layer setting you then run the Database update utility and it will detect the asset and will write and link it to the corresponding table.